

PD-AAP-704

ISN 35798

SCIENCE AND TECHNOLOGY INFORMATION
TRANSFER TO
ASIA, AFRICA, AND THE NEAR EAST

END OF PROJECT REPORT

PROJECT NO. 931-1114

U.S. AID/ST/DIU 000:56

AS COMPILED BY

JOHN W. HOUNSELL
FOREIGN AFFAIRS ANALYST
OFFICE OF INTERNATIONAL AFFAIRS

NATIONAL TECHNICAL INFORMATION SERVICE

000874.

U.S. DEPARTMENT OF COMMERCE



UNITED STATES DEPARTMENT OF COMMERCE
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161
Office of International Affairs

January 16, 1984

Robert E Gaul
Office of Development Information
and Utilization
Agency for International Development
Room 208, SA-18
Washington, DC 20523

Dear Mr. Gaul:

Attached is the Final Report of the Science and Technology Information Transfer Project (Project #931-1114). In accordance with your memorandum of July 26, 1983, this Final Report enumerates the ups and downs of the project, lists and describes all the publications that have been fully or partially funded through the project, and lists all the major training sessions funded by the project.

This Final Report briefly mentions the substantial contributions the project has made in many of the project countries, but its main purpose, again at your request, is to identify and analyze the problems which impeded its progress. In many cases solutions to these problems have been found and implemented. Sometimes NTIS was unable to apply solutions for lack of funds, the single greatest difficulty the project faced throughout its history. In almost all cases, however, potential solutions to the problems are suggested.

Although this project has ended, NTIS continues to disseminate its scientific and technical information to the Cooperating Agencies recruited through the project. A new project funded by the Near East Bureau will further increase NTIS's activity in that region. The Near East Project is the only outgrowth to date of the three region project which has just ended, but we hope to have projects for Africa and Asia in the future.

Sincerely,

David B. Shonyo
Acting Foreign Affairs Administrator

UNITED STATES GOVERNMENT

Memorandum

TO Mr. J. Frank Post
Office of International Affairs, NTIS

FROM : Robert E. Gaul *REJ*
Office of Development Information & Utilization, A.I.D.

SUBJECT: Science and Technology Information Transfer Project
(Project # 31-1114) - Final Report

DATE: July 26, 1983

As you know, AID funding of the subject project is scheduled to end on September 30, 1983, the conclusion of FY 1983.

Throughout the life of the project there has, of course, been standard requirements for Semi-Annual and Annual Reports. However, I believe that the preparation of the Final Report of any AID-funded project deserves special attention if it is to be a useful document. Therefore, in addition to the kind of material covered in earlier Annual Reports of this project, the Final Report should also contain the following:

- a. Careful enumeration of all the "ups and downs" of project experience in each country that is now or ever has been part of the project. It is just as important to identify what went wrong as what went right; what tactics worked and why they worked; what tactics failed and why, and also the reasons why it was initially believed that the latter would work. Try and identify in each case where the main strengths and weaknesses were located, whether with the LDC government, the Cooperating Agent, NTIS, AID, or wherever.
- b. List and describe all the publications that have been fully or partially funded through the project, describing any particular successes or less-than-successes in publication and distribution, and the perceived reasons in either case. As the three-language AMTID is of course the key publication of the project, it should receive particular attention.
- c. List all the major training sessions that have been funded through the project: the site, average length; and number, and geographic representation of participants; and whatever significant feedback has been obtained overtime as to the long-term effectiveness of the training. ^



I would like to stress that all of this information is requested for constructive reasons. Such "lessons learned" information is very valuable to AID, and I can assure you that the Report will be clearly identified in the DIU system as a particularly useful document for study by anyone contemplating the initiation of any effort to market technical information in less-developed countries.

It would be useful, I believe, for me to meet with you and the appropriate member(s) of your staff no later than September 1st to review the progress towards completion of the Report. I'll be in touch with you by phone to firm up a date for such a review.

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AS COMPILED BY

JOHN W. HOUNSELL
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INTRODUCTION

This is the final report of a five-year project, the objective of which was to increase the transfer of scientific and technical information (STI) from the United States to developing countries and further to encourage the developing countries to exchange information among themselves. This project was a three region continuation of a pilot project begun in 1971 and continued through to 1978, when this project began.

The Report, in substance and form, is presented as a constructive contribution to those who have now, or will have in the future, responsibility for designing or implementing any project having the same basic objectives as this one. As there have not so far been very many attempts by donor countries to carry out projects such as this one in the LDC's, the "lessons learned" incorporated in this Report should prove very useful.

Overall, in terms of total numbers of NTIS STI documents moved to LDC's, the project has been very successful, increasing the flow of U.S. STI from the National Technical Information Service (NTIS) to the project developing countries from virtually nothing when the project began to more than \$620,000 in the final year of the project alone. However, country by country, the project's accomplishments have varied markedly, as detailed in the following pages.

The success of the project can be measured by the impact of the wide range of activities developed by NTIS. Where there was no awareness previously of the utility of technical information, there now exists a sizeable population of users in many sectors. Where libraries used to shelve catalogs as if they were standard reference materials, they now communicate directly to users in need. Where NTIS had only a few hundred "Appropriate Technology" reports, there are now more than four thousand, a large number of them having originated within LDC's. In Asia, Africa and the Near East there are now eighteen information centers equipped and trained to serve the public with access to U.S. technical report literature, thanks largely to this project.

This report is organized into several sections. The first outlines the history of the project, noting the major changes or additions to project activity. The major publications of the project are described in the second section, and where appropriate a judgement of their usefulness has been made. There are no suggestions for improvement here, since all such ideas have already been incorporated in the latest editions of these publications. However, suggestions for improved use of some publications have been made.

The third section describes the "bottom line" of the project, the input of "Appropriate Technology" material and its dissemination in the developing countries. This section includes a chart showing sales figures for Appropriate Technology information disseminated, by year and by the original source of the information. Charts showing the transfer of technology to developing

countries by both the estimated number of documents shipped and by sales volume in each of the three regions are at the end of the report.

The fourth section relates the training activities instituted by NTIS to increase the use of STI in the developing countries, and discusses the dilemmas NTIS faced in deciding what type of training would be best for each different training need. The fifth section discusses the specific problems faced by NTIS staff over the years, explaining some solutions, and suggesting others with which, for various reasons, NTIS could not experiment.

The final section constitutes a three-region review of project activity, followed by individual country reviews for each LDC where significant project activity took place. This section will be particularly helpful to local USAID Missions or other donors contemplating instituting a similar project in their country.

The Office of Development Information and Utilization (DIU), the AID/Washington unit which sponsored this project during the past five years, was consistently very supportive of the project's activity, and of the need for increased funding levels. However, after several years of setting inadequate annual funding levels for the project, DIU's parent bureau chose to discontinue funding altogether. Responsibility for any follow-on project activity was left to the Africa, Asia, and Near East bureaus individually. The Near East bureau has approved a new project for that region, with activities commencing in FY 1984. The funding level for the latter project is of sufficient magnitude that project activity will not be hampered by any of the many funding-related restraints that so adversely affected the project reported upon in these pages.

The major success of this project was to demonstrate that the objective of raised consciousness of the values of technical information, and the need for cost recovery in the information industry could be introduced in LDC's through development of an information dissemination service. All project participants tried to augment the NTIS line of products and services, by offering others appropriate to the country.

This project went a long way to bring to light the dynamics of information supply and demand in an LDC society. The experience should provide a sound basis for planning similar, general activities on a regional basis, or sector-specific projects. The infrastructure which is capitalized by a project such as this needs continued information demand exerted by development projects in addition to indigenous demand. It will be difficult to convince LDC researchers to use technical information resources regularly when U.S. researchers commonly fail to do so.

Project staff members of the NTIS Office of International Affairs would be pleased to discuss this project at length with anyone contemplating a similar effort.

BACKGROUND OF USAID NETWORK OPERATIONS

- October 1971: Original NTIS/USAID-Bureau for Technical Assistance/Office of Science and Technology (TA/OST) PASA initiated. This was a two-year (later extended, and then eventually split into two projects) pilot project to "determine the interest in developing countries in staying abreast of technological advancements in the U.S. in selected fields, and to assess the value to less developed countries (LDC's) of selected types of U.S. technical reports."
- January 1972: First issue of Application of Modern Technology to International Development (AMTID). Each quarterly issue of this NTIS/USAID publication contained summaries of about 200 technical reports on subjects of potential interest in LDC's. It was distributed to about 500 public sector organizations in 40 LDC's. Recipients were given the opportunity to purchase reports of interest to them.
- March 1973: Questionnaire Evaluation of Project. About 30% of AMTID recipients responded. Among findings: 98% felt that AMTID contained material of interest to them; 51% indicated that it was difficult to get foreign exchange to purchase reports; 80% stated that English language was no barrier to the use of AMTID or U.S. technical reports.
- March 1973: First Field Visit. NTIS Director William T. Knox evaluated the program in Ecuador, Peru, and Korea. He found great interest in U.S. technical reports, but difficulties in getting reports to the people who could make the best use of them.
- October 1973: NTIS-USAID (TA/OST) Project expanded and extended. The three-year extension had these objectives:
1. Facilitating the transfer of relevant U.S. scientific and technical information (STI) to LDC's for utilization in development.
 2. Establishing linkages between NTIS and LDC scientific and technical information (STI) services; and
 3. Strengthening these LDC STI services.
- Major program components included: continued publication of AMTID, linkages with LDC

Cooperating Agency (CA) staffs, and increased field visits by NTIS staff.

- January 1974: First formal agreement with a Cooperating Agency. The Cooperating Agencies (public or private sector) were to promote and market U.S. technical information in their countries. Arrangements were made to allow local information users to pay in their national currency. NTIS provided agencies with promotional and marketing assistance, staff training, reference materials, a price discount on STI documents ordered, a postage subsidy for such STI materials, and priority processing of requests for NTIS products and services. The project's first Cooperating Agency was the Korea Scientific & Technological Information Center (KORSTIC).
- October 1974: Workshop/Training Program series initiated. The principal objectives, directed at staff members of Cooperating Agencies, were: (1) Familiarization with NTIS and its operating procedures; (2) Introduction to proven information processing and marketing techniques which may be applied by the cooperating agencies; (3) Survey of U.S. sources of technical information; exchange of ideas and experiences between Cooperating Agency staffs of different countries. The programs were held in the Washington, D.C., area; "Hands-on" training and site-visits were emphasized. The first graduate was Mrs. Biola Ariyo of the Federal Institute for Industrial Research (FIIR) in Nigeria.
- August 1975: AMTID changed in format, frequency, and distribution pattern. In an effort to place AMTID in the hands of its ultimate end-users, the AMTID mailing list was expanded to include approximately 4,000 LDC scientists, engineers, consultants, managers, small- and medium-scale entrepreneurs, and other professional and technical workers. All new recipients had seen AMTID, and expressed a definite interest in receiving it regularly. Frequency of issues was changed from quarterly to monthly, and the number of pages in each issue was reduced. The contents of the new version included a "Customer Memo" of news and announcements, listing of reports most in demand throughout the world, and descriptions of reports of particular interest in LDC's. Sales attributable to AMTID increased manifold as a result of these changes.

- October 1975: USAID field evaluation of program. The first USAID on-site evaluation of the project was undertaken by a three-man team, selected by USAID, in Brazil, Colombia, and Ecuador. Many of the findings and recommendations of this team have been incorporated into the current project, and have had a bearing on USAID's overall technical information policy.
- May 1976: First joint exhibit with a Cooperating Agency. NTIS and KORSTIC mounted a joint exhibit at a worldwide seminar on information services for LDC's, sponsored by the International Federation of Library Associations, and held in Seoul, Korea.
- June 1976: Kissinger statement to OAS General Assembly. Secretary of State Henry A. Kissinger informed the 6th Regular Assembly of the Organization of the American States, meeting in Santiago de Chile, that the "U.S. will ... expand and strengthen Latin America's access to the National Technical Information Service ..." In conjunction with this declaration, AID/Washington's Office of Development Resources in the Bureau for Latin America and the Caribbean (LAC/DR) asked NTIS to submit a proposal for an expanded program to serve only Latin America.
- Sept. 1976: Five year project ends. A network of Cooperating Agencies in seventeen countries spread over three regions was operational. Sales of technical reports in the project countries had increased from virtually none in 1971 to an average of well over 1500 items per month during 1976.
- October 1976: AID (TA/OST) asks for new proposal. This was to be a TA/OST-funded regional Africa/Asia/Near East project to run more-or-less parallel to the LAC/DR project. The splitting of the original worldwide project into two new projects was done in at least partial conformance with TA/OST's policy to eventually transfer the projects it launched to regional bureaus. However, LAC/DR was the only regional bureau willing to take on the project, so TA/OST continued to fund project activities in the other three regions.
- October 1976: NTIS runs program at maintenance level. Program funding from both TA/OST and LAC/DR for the two new projects encountered numerous delays. NTIS felt that it was essential to maintain program continuity; therefore, the network and body of users previously developed was kept together, on

- speculation that the dual project funding would be approved eventually by the LAC and TA Bureaus.
- Sept. 1977: Parallel AID projects approved by LAC/DR and TA/OST. Funding of both projects covered FY 1977 (retroactively) through FY 1979, a total of three fiscal years.
- March 1978: Program responsibility for the Africa/Asia/Near East project was shifted from AID's TA/OST to the Office of Development Information and Utilization (DIU) in the Bureau for Development Support (DSB), the latter being the new name for the former TA Bureau.
- March 1978: AMTID format modified. All AMTID entries now included an abstract of each report announced to avoid having the program's information users have to make an ordering decision based solely on a document's title, and to ensure that they would thereby get only the material they needed. Also, various issues of AMTID were devoted to particular themes complementing USAID's primary concerns, especially "appropriate" technology.
- May 1978: The First Annual Regional Directors' Conference for the Africa/Asia/Near East Project was held in Seoul, Korea from May 29-31, co-hosted by the local Cooperating Agency, The Korea Scientific and Technological Information Center (KORSTIC).
- June 1978: The first in a series of User Education Seminars was held in the Philippines, Thailand, and Sri Lanka. Specifically, the seminars introduced information services available to the user through the Cooperating Agency in their country and gave them a broad orientation to U.S. scientific and technical information products and services. Emphasis was placed on creating a general awareness of the value of technical information in development projects.
- October 1978: The first issue of a French-language version of AMTID was distributed. This edition was intended for use primarily in francophone Africa.
- November 1978: A Developing Country Staff headed by Terrance L. Lindemann was organized within the Office of the Director, NTIS, and responsibility for the current program was shifted to the Staff from the NTIS Promotion Division. Within this Staff, David B. Shonyo managed the current STI Transfer Project, and a full-time Africa specialist, John Hounsell, was assigned to the project. These changes

- reflected the growing activity of the program in the overall NTIS operations.
- June 1979: NTIS offices in Springfield, Virginia assigned two new staff members to specialize in operational problems in Order Processing and Customer Inquiry regarding developing countries.
- August 1979: Another NTIS position was created to deal with NTIS overseas representatives on various aspects of implementing the Cooperative Agreements. At the same time, responsibility for NTIS agreements in India were transferred from the Office of Product Management to the Developing Country Staff in order to better cope with special problems of technology transfer in developing countries. This arrangement also served to integrate the Indian agencies more closely with Network activities.
- November 1979: The Second Annual Regional Directors' Conference was held in Pattaya, Thailand, co-hosted by the local Cooperating Agency, the Thailand Management Association.
- January 1980: An independent evaluation of the NTIS/USAID project was submitted to USAID, and NTIS provided USAID with its own comments on the evaluation.
- February 1980: NTIS changed its sales reporting methods, which enabled NTIS to report on the sales of NTIS material originally input by USAID. It was also decided to have NTIS input USAID documents listed in "AID Research and Development Abstracts," (ARDA) a quarterly publication of DIU.
- Sept. 1980: The NTIS videotape, "The World of NTIS" was completed and sent to all NTIS Cooperating Agencies to show to their clients to promote project activities. To better evaluate the usefulness of project activities, the NTIS "Case Studies Handbook" was completed and sent to all NTIS Cooperating Agencies.
- November 1980: The Third Annual Regional Directors' Conference was held in Colombo, Sri Lanka, co-hosted by the local Cooperating Agency.
- December 1980: Production of AMTID was transferred to the NTIS Cooperating Agency in Mexico. This marked the beginning of a new policy for both the DSB and LAC projects to involve the Cooperating Agencies as much as possible in the production of Network publications.

- October 1981: Project funding for the new fiscal year is reduced by the head of DIU's parent bureau, against the stated wishes of DIU. The project begins to wind down.
- November 1981: The Fourth Annual Regional Directors' Conference was held at New Delhi, co-hosted by the local Cooperating Agency. Advance training seminars were given for the first time at this Conference. This policy was to continue through the end of the project. The Conference also marked the start of having NTIS's ACCESS publication produced by the Cooperating Agencies.
- May 1982: The Cooperating Organization Manual was produced by Constellate Consultants, Ltd., a project Cooperating Agency in India. Its purpose is to help the Network members improve their management practices, and help make them self-sufficient in information dissemination in time for the end of the project.
- October 1982: Project USAID funding for the new fiscal year was further reduced by the head of DIU's parent bureau, again against the stated wishes of DIU. From this time, NTIS activities were geared to preparing the project beneficiaries for the end of their USAID subsidies, while retaining their ability to fulfill the project goal of increasing the dissemination of U.S. scientific and technical information for development.
- November 1982: The Fifth Annual Regional Directors' Conference was held in Singapore.
- August 1983: AMTID is to become self supporting. AMTID's format was changed, effective at the end of the fiscal year, to better reflect the needs of the subscribers. The new format breaks AMTID down into six different categories: Manufacturing; Processing Industry; Agriculture and Food; Construction; Health; and Management and Economic Development. A subscription fee will be charged and advertisements will be sold to cover the costs of production.

PUBLICATIONS AND OTHER MEDIA

Application of Modern Technology to International Development (AMTID). AMTID is a monthly bulletin which lists and describes NTIS technical reports and other information products of potential interest in developing countries. Originally, AMTID was a thick quarterly volume listing all recently input NTIS reports of any relevance to developing countries. Librarians favored it, but, unfortunately, the LDC end-users of information didn't have easy access to it.

The format was changed to a 12-page monthly publication with much fewer, but more carefully selected, citations. Most issues highlighted a particular high-interest subject area. The target audience was the actual information end-user. This format met the users' needs, and subscriptions soared from 5,000 in 1977 to 13,000 at present. The following table outlines this history:

<u>Year</u>	<u>Circulation</u>	<u>Comments</u>
1974	300	Book format
1975	3,100	12 page issue
1976	4,000	
1977	5,000	
1978	8,000	Spanish and French issue started
1979	11,000	
1980	14,000	
1981	13,000	
1982	13,000	
1983	13,000	

AMTID has proven itself to be the single most important generator of demand for scientific and technical information available through the project. Since the introduction of AMTID, sales in the developing countries rose from virtually nothing to more than \$500,000 a year. In countries where there is no NTIS Cooperating Agency, AMTID is the only source of information about relevant NTIS products, and so is generally solely responsible for the sales there. (See the sales statistics at the end of this Report.) Unfortunately, project budget cuts decreed by DIU's parent bureau necessitated reducing the page count of AMTID from 12 to 8 pages, with a consequent drop in titles advertised.

In December 1980, the English publication of AMTID was transferred to the Network's Mexican Cooperating Agency, INFOTEC. INFOTEC was already translating and printing the Spanish edition of AMTID. This step was taken both to help achieve the USAID goal of making project activities self-sufficient and, equally important, to obtain a more LDC-oriented viewpoint about what kind of publications are useful in the developing world.

The final step to make AMTID self-supporting was taken in May 1983, with the decision to alter the format of AMTID from an omnibus publication with information on all development-related topics to an AMTID series of six different topics, each series becoming available for sale to the subscribers every two months. The six topics are: Manufacturing; Processing Industry; Agriculture and Food; Construction; Health; and Management and Economic Development.

One problem with AMTID was that in a 1980 economy move NTIS discontinued using media codes to identify which documents were ordered in response to which promotional material. Since then, therefore, it has not been possible to know for certain how many sales were the result of AMTID.

The Appropriate Technology Bibliography

The NTIS Office of International Affairs saw a need both to inform users about the large number of reports in the NTIS collection which could be used by organizations working with Appropriate Technology, and to develop a publication which would list these reports in one handy reference. For that reason, a bibliography entitled "Appropriate Technology Information for Developing Countries" was published in 1979 and updates published periodically since. The fourth and most recent version (January 1983) contained abstracts of approximately 3,300 reports from the NTIS collection.

NTIS had discontinued using media codes which would indicate how many sales this publication generated, but the next edition will have them. In the latest edition, NTIS revised the descriptors used by clients to locate the documents they need. Also, the indexes were put in front of the book, for ease of use.

ACCESS to Information for International Development

The ACCESS newsletter was intended primarily as a medium to keep Cooperating Agency staff members informed of Network activities, new NTIS products and services, activities of various project participants, and other news items of mutual interest. Copies were also distributed to interested parties within USAID/Washington and the USAID Missions, USIA libraries, and other subscribers.

At the fourth annual Regional Directors' Conference of the NTIS/USAID Africa/Asia/Near East Network in New Delhi in 1981, the Cooperating Agencies suggested that they produce their own newsletter. As a result, each ACCESS issue since that time has been published with one of the Cooperating Agencies as guest editor. This change has been highly successful, and should be instituted early in the life of any similar future project.

The Cooperating Organization Manual

Taking advantage of the experience of a Cooperating Agency which had developed a very effective program in its own country, NTIS contracted with them to prepare a Manual suggesting policies and procedures for all the Cooperating Agencies to streamline their operations as much as possible. The work produced was twice as voluminous as desired, no doubt lessening its utility. Two other unforeseen drawbacks to the relevance of the Manual were that it was prepared by a Cooperating Agency which had many times the demand of most of the other Cooperating Agencies, and also, it is a private organization, while most Network members are public organizations. As a result, the manual was less relevant and useful than could have been the case. It is nonetheless a helpful publication for those Cooperating Agency managers and staff with the motivation to read through it. A more concise manual should be prepared at the beginning of any similar project in the future instead of towards the end of it, with more care taken in choosing a more typical organization to produce the manual.

The Information Systems Management Workshop Workbook

The Workbook served a dual purpose. It was primarily intended to be an accompaniment to the Workshop which trained the staff of the Cooperating Agencies in how to find the NTIS information they needed, how to order it, and how to promote and provide this service to their clients. It also doubled as a handbook for the staff when they returned to their countries. Since it is difficult to provide such a dual function book, the Cooperating Agency Manual was created later, and the workbook was modified to fulfill its primary role more effectively. In a future project the workbook and manual should be created early-on, and as two separate documents.

How to Use the NTIS Order Processing System

This 26-page manual provided the Cooperating Agencies with step-by-step instructions on how to make effective use of NTIS. It included a description of the NTIS order processing system, how to order, dealing with order fulfillment problems, using an NTIS deposit account for payment, and other similar topics. It was superseded by the Workshop Workbook and later the Cooperating Organization Manual, but was still found to be useful for individual clients in project countries without Cooperating Agencies. Such a manual should be produced and made widely available early in any similar USAID project in the future.

The World of NTIS

A videotape entitled "The World of NTIS" was prepared in 1980. It proved to be very useful during visits to NTIS by individuals

from project countries. It was also useful for showing to Cooperating Agency staff, and potential and actual users of NTIS in the project countries themselves. The visual reinforcement and familiarization with NTIS of all who saw it contributed substantially to the use of NTIS information.

The NTIS Slide Show

One limitation on the use of "The World of NTIS" videotape in LDCs was that very few Cooperating Agencies had ready access to the equipment necessary to play it, and arrangements often had to be made with the local U.S. Information Agency (USIA) office to use their facilities and equipment. Consequently, NTIS developed a slide show telling essentially the same story as the videotape. The slides were sent along with a suggested script and were very well received.

An International Technical Information Network (Project Brochure)

This is a 12-page brochure describing both this project and the Latin American project (virtually the same except that the Latin American project was more generously funded). It was the fore-runner to "The World of NTIS" videotape, and the slide show discussed above.

The Case Studies Handbook

The first evaluation of the project was done in October 1975, and the second evaluation, a superficial one, was done in the Fall of 1979. Both evaluations were critical of the project, based on philosophical criteria, rather than on the actual accomplishments of the project. We do not know whether this was because the task orders for the consultants were unclear, or because they were not followed.

Part of the problem was that no studies had been done through this project (funding was not available) to show that the NTIS documents ordered were actually put to use. NTIS subsequently addressed this lack of information by hiring a consultant to document the use of the NTIS material ordered in Indonesia, Thailand, and the Philippines. This one time NTIS operation was to be continued by having the Cooperating Agencies carry out a sustained effort to document such use, and a Case Studies Handbook was prepared and sent to all the Cooperating Agencies as guidance. However, efforts to make this a continuing effort were not carried through, because no incentive was given to the Cooperating Agencies to do so. A future project should include funds specifically earmarked to pay the Cooperating Agencies to carry out such studies on a continuing basis for the first few years of the project.

Another strategy to obtain case studies is to give away free documents to those who can't afford to pay for them, if they fill out a statement which will provide all the information needed for a case study, except the results of the use of the information. Then a follow-up a year later could be made for the final results, first by letter, then by paying the Cooperating Agency to provide it if no reply is received. This is an excellent example of a somewhat prosaic activity which should be built into any project of this nature. They don't cost much, but they provide valuable, concrete information as to the real effectiveness of the project.

General Recommendations:

Publications such as those described above should be produced as soon as possible in the life of similar projects. This means heavy first-year funding of the project, but it would be money well spent.

Media codes to keep track of sales of Appropriate Technology material should be used on all project promotional material.

The Cooperating Agencies should produce Network publications themselves as much as possible from as early as possible, rather than letting it be done by USAID, NTIS, or other donor organizations.

APPROPRIATE TECHNOLOGY INPUT & SALES

Input

NTIS did not stress the acquisition of "Appropriate Technology" (AT) material until it was urged to do so by USAID/DIU in 1978. The AT program did not really show any notable success until 1981 when NTIS instituted an exchange system whereby LDC sources or books accepted for input into the NTIS collection became eligible to receive twice as many pages of NTIS information, free of charge, as they submitted to NTIS. Since that time, more than 1,200 AT documents have been added to the NTIS collection under this program. When USAID project funds were cut back for FY 1983, this AT element of the project had to be cut. As a result, input from the Cooperating Agencies came to an end. Any similar future project must provide continuing adequate funding for the acquisition of AT information from the beginning of the project.

Just before the project ended, agreements were reached with the International Bank for Reconstruction and Development (IBRD), the United Nations Industrial Development Organization (UNIDO), and the World Health Organization (WHO) for the input of their documents. The IBRD input 352 books, UNIDO input 20, and WHO input 9 before the project ended. All three organizations are now regularly sending reports for input.

Sales

More than \$24,000 worth of these publications have been sold by NTIS in LDC's, demonstrating that the input of AT material became an important part of the project despite its late start. The accompanying chart shows the sales of AT documents, arranged by the source of those documents. AIDIU and AIDOST are general source codes which include ARDA documents as well as documents from all the Cooperating Agencies. In addition to the attached sales figures, USAID's information unit purchased an average of more than \$1,000 a year worth of NTIS information for use in its development projects.

The LAC/DR project had a special Appropriate Technology Subsidy to make documents available to the "poorest of the poor" either directly or through private voluntary organizations which worked with the poor. Several hundred documents were distributed through this subsidy over a period of five years, providing information to benefit the poor, information which they could not have obtained in any other way. Such a subsidy should be a part of any similar USAID information project in the future.

SALES OF APPROPRIATE TECHNOLOGY MATERIAL
put into the NTIS collection through the project
by the sources identified below

	ITP	ITPS	AIDIU	AIDOST	CONCON	INFOTEC	VITA
<u>FY 1980</u>							
1st Qtr	216.00	15.00		7851.00		5.25	
2nd Qtr	292.50	20.00		8990.92		143.00	
3rd Qtr	168.25	21.00		6795.00		110.25	
4th Qtr	151.00	21.00		7373.25		39.00	
Total	827.75	77.00		31010.17		297.50	
<u>FY 1981</u>							
1st Qtr	222.75	35.00	72.50	6873.75			90.50
2nd Qtr	682.25	8.75	86.00	9505.80		15.00	175.00
3rd Qtr	159.00	34.00	691.00	10664.50		7.00	60.00
4th Qtr	159.25		1040.50	4605.65			40.00
Total	1223.25	77.75	1890.00	31649.70		22.00	365.50
<u>FY 1982</u>							
1st Qtr		21.75	952.74	2349.05			
2nd Qtr	11.00	24.00	1270.50	1542.56			
3rd Qtr	164.00	750.00	1208.00	8001.00			
4th Qtr	100.00	888.30	493.50	5369.00	83.50		
Total	275.00	1684.05	3924.74	17262.11	83.50		
<u>Fy 1983</u>							
1st Qtr	39.00	46.50	890.50	6837.50	59.50		
2nd Qtr	308.00	55.50	614.50	5622.00	46.00		
3rd Qtr	653.00	20.50	631.50	10333.00	88.50		
4th Qtr	24.50	4.50	429.50	10099.50	103.50		
Total	1024.50	127.00	2566.00	32840.00	297.50		
<u>Grand Total</u>							
	3350.50	1965.50	8380.74	112761.98	381.00	319.50	365.50

Combined total of all sources from 1980-1983 = 127,524.72

Identification of source acronyms

ITP = Intermediate Technology Publications, U.K.
ITPS = ITP documents translated into Spanish by the LAC project
AIDIU = Documents also listed in USAID's "AID Research and Development Abstracts" (ARDA) quarterly publication
AIDOST = Documents from many different sources, including most documents from the project's Cooperating Agencies
CONCON = NTIS Indian Cooperating Agency Constellate Consultants input so many documents that it was assigned its own source code
INFOTEC = NTIS's Mexican Cooperating Organization
VITA = Volunteers in Technical Assistance, a U.S. private development consulting organization

TRAINING

The Information Systems Management Workshop

A prerequisite for technology transfer on a significant scale is an LDC organization and staff capable of transmitting the raw information to those who can use it. In most cases such a staff didn't exist, and where it did, training in NTIS products and services was necessary.

The need for such training was recognized early in the life of the project. The first workshop to train Cooperating Agency personnel in information dissemination and in NTIS products and services took place in 1974, and with a few exceptions twice a year since then. The chart at the end of this section gives an overview of the participants' national origin and the time of their training. A list of their names and organizations is keyed to the chart.

Over the years the workshop changed its emphasis from understanding NTIS to understanding the promotion and marketing of technical information in LDC's. The course critiques handed in by the students always rated the marketing section of the course as the most useful.

The first workshop devoted only one half day of the course to marketing. This was first increased to one full day, and then the last three regular workshops devoted two full days to marketing. The final workshop of this project was an advanced five-day workshop solely on marketing for higher level staff from the Cooperating Agencies.

From the first workshop onwards, an early and marked increase in sales of NTIS information would often follow a particular participant's attendance at the workshop. Equally marked improvement in the Cooperating Agencies handling of NTIS orders was also common.

An outside evaluation of the workshop was conducted twice to seek areas of improvement that may have been overlooked by the NTIS staff. The evaluations noted that the major problem with the workshops was the diversity of the attendees, and suggested that the basic workshop be reserved for those directly working with NTIS information, and a more advanced workshop held for Cooperating Agency directors and staff already familiar with NTIS (usually those who had already taken the first course). In response to the latter suggestion, NTIS arranged to have the USDA Graduate School give a one-week course in marketing. It has proven to be very useful.

Another major problem has been that some NTIS-trained Cooperating Agency staff have left the Cooperating Agency shortly after their training. The intra- and inter-country "brain drain" problem has always adversely affected U.S. development assistance training programs, and there is little that can be done about it.

On-Site Technical Assistance

Another approach to training Cooperating Agency staff was to have an NTIS project officer provide abbreviated training courses during in-country visits. The training was not as thorough as that given at NTIS, but a greater number of Cooperating Agency staff were trained during a site visit than could ever be brought to the U.S. for training.

On-site training was less expensive per individual trained, since only the air fare and per diem of one NTIS trainer was being paid, and several countries were visited on each trip. However, many Cooperating Agency directors and subordinate staff who attended the workshops asserted that there was no substitute for visiting NTIS. Only when a trainee visited NTIS could he get a feel for how NTIS operated, and apply the same principles to his own operations. It was also very important for the trainees to establish personal contact and rapport with the NTIS staff they repeatedly dealt with by mail in NTIS order processing, shipping, customer services, and product management. Conversely, through such contact, NTIS staff not personally familiar with conditions in developing countries could gain some understanding, and so more effectively help solve the special problems that often arose.

On-site training, over time, proved to be generally very effective. An example of this is that after a three day site visit by an NTIS project staff trainer to Allied Publishers, Pvt. of India, Allied's sales doubled over the next year.

Regional Directors' Conference

It was recognized early on that after the initial familiarization with NTIS and information dissemination provided by the first workshop, further training was needed for the higher level managers of the project's Cooperating Agencies. NTIS first used the Annual Regional Directors' Conference for this purpose in 1981 in New Delhi. Management training was provided there as well as in the next Conference in Singapore. In retrospect it is clear that this type of training should have been given from the very first Annual Regional Directors' Conference in Seoul in 1978. A reinstitution of this project or a similar project should provide such advanced training, including some emphasis on manpower management, as an integral early-on element in project design.

User Education Seminars

During site visits, user education seminars were usually arranged in which the visiting NTIS staff member made a presentation about U.S. information products and services available through the Cooperating Agency. Sometimes two or three of these seminars were given during a site visit. The three region average over time was about one and a half seminars per country per visit. The transfer of information always increased after these sessions, and any future project should schedule as many as possible.

AFRICAN, ASIAN AND NEAR EASTERN PROJECT COUNTRY PARTICIPATION IN THE NTIS SYSTEMS MANAGEMENT WORKSHOP

<u>AFRICA</u>	FALL 74	SPRING 75	FALL 75+	SPRING 76 +	SPRING 77	SPRING 78	FALL 78	SPRING 79	FALL 79	FALL 80	SPRING 81	FALL 81	SPRING 82	SPRING 83	FALL 83
Botswana*												12A	13H		
Ghana											11E		13I		
Kenya													13N		
Nigeria	1A				5D				9I		11K				
Senegal												12J 12K			
Sudan									9L	10M		12L			
Tanzania											11P		13K		
Zaire								8M							
<u>ASIA</u>															
Bangladesh													13M	14A	
India							7F 7G		9G	10N 10I			13J		
Indonesia						6G 6H			9H	10J	11H	12G			
Korea		2C 2D						8L						14M	
Nepal															15A
Pakistan											10K				
Philippines		2E				6I			9J 9K	10L	11N				
South Pacific**													13O		
Sri Lanka							7H				11O				
Thailand						6J	7I				11Q	12M			
<u>NEAR EAST</u>															
Egypt					5E		7K				11D				
Tunisia												12N	13L		

*Alphanumeric notations are keys to participants' names on following pages.

**The Australian Cooperating Organization is serving the South Pacific.

+Latin American Project Participants only.

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 2A - Ms. Balbino Chavarro de Montanes
 2B - Mr. John J. Carchi
 2C - Mr. Chung-Jae Cha, KORSTIC
 2D - Mr. Tae-Seung Kim, KORSTIC
 2E - Ms. Manolita Leuterio
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 10K - Mr. Mohammed Zahid, PASTIC
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- 14J Alvaro Herrera Acena, INTECAP, Guatemala
- 14K Gustavo Izaguirre R., CII, Honduras
- 14L Hugh Carroll, SRC, Jamaica
- 14M Jung Ook Park, SFL, Korea
- 14N Peter Smith, R Hill & Son, New Zealand
- 14O Sarah Benites, INTN, Paraguay
- 14P Mohammed Arfaj, SANCST, Saudi Arabia

- 15A Purna P. Amatya, RECAST, Nepal

PROJECT PROBLEMS

Some instructive problems faced by the project are grouped below in two general categories: project management/funding, and host country constraints.

PROJECT MANAGEMENT

Funding

Virtually every fiscal year, USAID's confirmation of the annual funding of the project was delayed, often until January or February, which meant that NTIS had to delay implementing project activities for the first third or half of the year or risk incurring expenses which might not be reimbursed through USAID project funds, expenses which NTIS could not fund from its own resources. During one early year of the project, funding was never approved until the following fiscal year, and then applied retroactively. The project had to be left in caretaker status that year, and then activities were feverishly pursued to fulfill project goals in time. USAID should streamline its decision-making and accounting procedures to avoid such inconvenience and danger to its contractors.

Criteria by which Project was to be Evaluated

NTIS management of this project was evaluated twice by USAID, once before being split off from the four-region pilot project, and once after. Each time NTIS was judged by the philosophical criteria of the evaluator, rather than by how well it fulfilled the output required by the project's USAID Logical Framework and Project Paper. The result was that NTIS was not rated highly by the evaluators despite having more than fulfilled the objectives of the project. Not only was this not a fair evaluation, it seriously hurt NTIS's ability to manage the project, by bringing the goals stated by USAID in the log frame into question, and by leaving NTIS in doubt of the support of USAID in fulfilling the stated goals of the project. The latter was especially serious since, as mentioned in the "Funding" section above, virtually every year's project funding was never assured until far into the fiscal year.

Evaluations which do not judge a project by its actual accomplishments according to USAID's originally stated objectives should be rejected by USAID. Adequate funding should have been made available by USAID to fund in-depth evaluations rather than superficial ones.

Project Country Status

The status of some project countries changed during the life of the project. Any future USAID project of this type should include explicit instructions on how these countries are to be treated when their status changes. An example is India, which was not a project country when the three Cooperating Agencies were signed on. India received no direct subsidy for purchase of NTIS documents; if it had, the subsidy for this one country would have used up all project funds, and was obviously not necessary anyway, since even without a subsidy, Indian sales were third highest in the world, behind only Canada and Japan. However, heads of the three Cooperating Agencies in India attended, and contributed greatly to the Annual Regional Directors' Conferences. Later, when India became a project country, the three Cooperating Agencies also received and provided training, and prepared project publications such as the Cooperating Organization Manual and a revision of the Appropriate Technology Bibliography. In this way India served as a valuable resource to the other project countries, but because of the change in India's project country status, NTIS was uncertain how much it should allocate to those Indian activities that benefitted all project countries.

Another example is Pakistan, which signed up for the project while a USAID program was operating in the country. The USAID country program was subsequently cancelled for a while for political reasons, and later it was reinstated. During the hiatus NTIS was unsure about whether it should allow Pakistan USAID subsidies. NTIS was obliged to continue supporting the organization there by virtue of its agreement with it. NTIS's flexible management was essential to handling this problem, and such flexibility must exist in any future project.

Two more examples are Nigeria and Korea, which became graduate countries when USAID's country programs were phased out. USAID subsidies through this project were discontinued, but training and attendance at the Annual Regional Directors' Conferences continued, the former at their expense, the latter at the project's expense, to the benefit of all parties, including the other Cooperating Agencies.

Travel

A multi-country project like this can never be successful if it contains serious dollar or time constraints on travel by USAID or PASA agency personnel who have the responsibility to make the project effective. This project always contained inadequate funding for travel and, for a while, the problem was accentuated by NTIS travel time ceilings imposed on all department of Commerce personnel. There was no other factor which so hindered successful implementation of this project.

Any future project of this nature must have a provision for keeping a project staff member full time in the region or regions, with full authority to travel as needed by the project, or contain funding fully adequate to allow U.S.-based staff to travel to the extent that the project requires.

Local USAID Mission Involvement

In a few cases NTIS received generous support from local USAID Missions. The USAID Missions in Indonesia, Morocco, Senegal, and Tunisia were extremely interested and helpful. These Missions also made substantial use of NTIS publications for their own information needs. USAID/Senegal even funded a limited project of its own to extend the use of NTIS in Senegal.

NTIS staff experienced disinterest and/or aloofness by some other USAID Missions. In one case, USAID/Kenya, there was outright opposition. The reason for this may be that the local Mission doesn't receive as much credit for successful implementation of a centrally-funded project as it does for a Mission-originated and funded project. This is a situation which is not likely to improve, and should be treated as a "given" in designing any future project like this one, and is just one more argument in favor of a high frequency of field visits by USAID and PASA project staff. It was interesting and significant that over time, USAID Mission cooperation with project operations often fluctuated, depending upon the view point of various Mission officers as the Mission staff changed over the years.

Active assistance by the local USAID Mission is not always necessary for project success, but sometimes it could be helpful. The Kenyan Cooperating Agency operations are now at a standstill because of foreign exchange restrictions, and an active USAID Mission involvement in ordering NTIS information for local Mission projects could possibly have helped out in this situation by providing funds for the purchase of such NTIS information, or by lobbying with the Kenyan government to encourage more government controlled foreign exchange to be used for this purpose. The surprising success of the project in Ghana and Botswana, countries with a small demand for information, is in large part due to the efforts of local USAID Mission personnel. Conversely, the project in Morocco and Senegal never got off the ground despite high interest and support from the local Mission, and the project in Tunisia is making very slow headway, although it has full Mission support.

Public vs. Private Sector Intermediaries

In each project country an early decision had to be made whether to use a public or private sector organization for Cooperating Agency. Worldwide USAID emphasis is now on maximum use of the private sector, but in some countries such was not feasible for this project. For example, no private sector organization in

Morocco was willing to join the project, because the government was providing information free of charge and, no private sector organizations could compete. Local USAID Mission support could have helped coordinate this project's activities with host government policies, particularly when a Cooperating Agency was being chosen.

Translations

Should reports be translated? In francophone Africa everyone wanted reports in French. Interestingly though, it was found that more francophone African researchers, professors, and even businessmen could read English than could not, but commonly the heads of many government ministries could not read English. One can surmise that the latter situation may have contributed to lack of government acceptance of the project in some countries.

Any similar future project should provide fully adequate funds for translation of NTIS reports into French, and even translation of locally produced reports into English to generate local enthusiasm for the project. It is even more important to translate promotional materials into the local language, so that end users can more easily learn what is available. Most unfortunately, project funding has never permitted more than minimal translations.

Technological Sophistication

How complex can such a project be in developing countries and still be effective? Are U.S. products and services too complex for them? Should microcomputers or even microfiche readers be introduced into these countries? NTIS found that the answer to these questions varied widely. The countries even marginally ready for the new technology rapidly adopted its use and maintained it fairly well despite weak infrastructure, but in some other countries, even microfiche equipment couldn't be properly maintained.

NTIS provided many of the project countries with microfiche readers and microfiche to demonstrate and use as a reference library. Sometimes, when a bulb burned out, it could not be replaced from a local source, and some organizations did not even request NTIS to replace it. Others did, but the lesson is that the technology transferred must take into account the local ability to use and absorb it.

HOST COUNTRY CONSTRAINTS

Foreign Currency Exchange

Many developing countries do not permit their citizens or businesses, or even their ministries to obtain foreign currency without permission of the central bank. This often involves long delays and generally impedes the flow of published development information to those countries. Usually proof of receipt of the goods imported and pro forma invoices are required. Often, invoices must be for amounts less than an arbitrary figure set by the government, so several invoices are sent dividing up what was a single shipment. Also, though NTIS usually requires pre-payment of an order, exceptions were made to its policy to accommodate these countries.

Several other expedients were also used to alleviate this problem. When someone from these countries attended a project activity requiring air travel, the Cooperating Agency would purchase the ticket with local currency, and NTIS would deposit the dollar equivalent in their NTIS account. Some Cooperating Agencies produced translations or other publications for NTIS, and were paid for such services by dollar credits to their NTIS accounts.

Mail

The mail in many developing countries is so unreliable that depending on it would have hampered the transfer of NTIS information to those countries. To get around this, in some cases NTIS had enjoyed the support of the local USAID Mission in forwarding materials to the local Cooperating Agency. This expedient, however, was only possible temporarily in the early stages when not many NTIS publications were sent each month. Once the volume of incoming NTIS publications increased, the Cooperating Agency had to then use the mail, but by then its shipments were frequent enough to enable it to work out a solution using a special contact at the post office, who could recognize the weekly shipments. Air freight could also be used, but this requires a very large volume of incoming material.

The unreliability of the mail and the distances involved also cause problems with clients who resent the long delays involved in receiving their documents. A solution to this problem would be to have local on-the-spot reproduction of the most demanded documents, but the expense of this solution has so far proven prohibitive. The expense for the Cooperating Agency of keeping stock on hand is even greater. One solution being tried in Latin America is to provide the Cooperating Agencies with microfiche copies of most of the Appropriate Technology documents in the NTIS collection, and having them allow their clients to read the documents at the Cooperating Agency offices, using microfiche readers provided through the project.

Other Public Utilities

Electricity is not reliable in many developing countries. This makes the use of equipment such as computers very difficult. Even for simple equipment such as microfiche readers, transformers often have to be provided, or the readers cannot be used. Here again is a very important factor in project operation which, like others mentioned earlier, is either not foreseen at all as a factor, or its significance is initially greatly underrated.

General Infrastructure

The more developed a country, the greater use it can make of development information. It is important to help the least developed countries start using information, but the more developed countries will show greater transfer of technology for an equal amount of effort. NTIS suggests that any future project either concentrate on the more advanced developing countries, or provide much more start-up and "hand-holding" funding to operate the project in the least developed countries, particularly in the early years.

Establishing and helping to maintain for a few years an effective Information project in an LDC, however prosaic such a project may appear, is the best multi-sector way to help LDC's help themselves.

Customs Regulations

NTIS commonly encountered problems with Customs in many of the project countries. Often special instructions provided by the Cooperating Agencies had to be followed to permit the import of NTIS information, as well as microfiche readers and other equipment.

Computer tapes had to be described as magnetic tapes, microfiche labeled as documents, or a Duty would be imposed. Often the Cooperating Agency had to obtain a ministry level decision to allow microfiche to be given the same preferential treatment that books normally receive in most countries' Customs regulations.

CONCLUSION

This Final Report contains the distillate of several years' experience in trying to make a potentially very promising project work under a wide variety of constraints large and small, constraints contributed, to varying degrees, by all parties involved. Unfortunately, the Information field is one of those about which all manner of outsiders feel that they have considerable knowledge transcending that knowledge-gained-by-experience possessed by USAID and NTIS staff involved in the day-to-day effort to make a development project work, against considerable odds. Where such outsiders might hesitate to make policy in the Agriculture, Health, Population, Education, and other fields of International Development work, there seems to be no such hesitation to do so in the Information field.

At the strong urging of the current USAID/DIU Project Manager, a Foreign Service Officer with extensive field experience, NTIS has tried to make this Final Report as comprehensive, frank, and constructive as possible. We hope it will be read through the years by all in USAID or NTIS who are, or will be, involved in any way in designing, implementing, evaluating, or making funding decisions for any similar project(s) meant to assist LDC's by transferring U.S. technical information to them.

REGIONAL REVIEW

Over the life of the project NTIS brought into the Network nineteen Cooperating Agencies (CA) in seventeen countries, and transferred \$2,374,629 of scientific and technical information through these CA's. Significant life-of-project implementation information is outlined below, first by region, and then country-by-country. The failures and problems are also listed, and in most cases suggestions are made for improving the chances of success for any future similar project.

ASIA

The project established eleven Cooperating Agencies in nine Asian countries. Asia generally has a better developed infrastructure than Africa or the Near East, so the project was more successful there in terms of transferring technology. The wider familiarity with the English language in India also contributed to greater acceptance of U.S. technical information there. Sales by the three Indian Agencies (India was the only country with more than one CA) followed only Canada and Japan, topping \$300,000 a year the last few years of the project. All the Cooperating Agencies combined increased the demand for U.S. information over the life of the project from a few hundred dollars a year to about \$400,000. The Asian success was also reflected in the fact that all five of the project's Annual Regional Directors' Conferences were held in Asia.

AFRICA

The pervasive low level of development of much of Africa makes it very difficult to develop a large scale of technology transfer. The concept of information as a useful commodity seems not to be accepted by most businessmen and government decision makers there. Nevertheless, the Network included seven African Cooperating Agencies. Compared to Asia, sales are modest, but this is against a background of no sales at all before the project began.

THE NEAR EAST

Efforts to extend the project into the Near East have achieved their only marked success with the addition of the Societe Tunisienne de Diffusion to the NTIS/USAID Network as the first Cooperating Agency in the Near East. Efforts to launch a Near East information dissemination project, to pick up on NTIS' efforts as the current project ends, finally met with success as the USAID Near East Bureau budgeted for activity to begin by October 1983.

NB. In the following section of this Final Report, the "Total Demand to Date" cited on most country pages below the address of the NTIS Cooperating Agency is the demand manifested through the Cooperating Agency. For the total demand of the country as a

whole, (including those orders which NTIS receives directly, rather than through the CA), please refer to the tables at the end of this Report.

Statistics are included for all project countries which showed significant demand. Some of the countries included in the statistics are not mentioned individually in the regional review, because no significant NTIS project activity took place there. However, since NTIS's major promotional vehicle, AMTID, is also distributed to those countries, the sales there should be considered a result of the presence of AMTID, and therefore a result of this project.

ASIA

BANGLADESH

Cooperating Agency since April 1982:

Micro Industry Development Assistance Society
(MIDAS)
G.P.O. Box 800
Dhaka-2

Principal NTIS Contact: Badruddin Ahmad, Director
Sanjoy Barua, Information Officer

Total Demand to date: \$ 875.00

USAID Liaison: Michael Sullivan, Program/Training
Officer

Comments:

NTIS project staff members had been visiting Bangladesh since 1978, centering efforts on the Bangladesh Scientific and Technical Information Centre (BANSDOC). The visits generated a great deal of enthusiasm at BANSDOC, which signed the Cooperating Agency agreement in 1979, warning however that it had to be approved at higher levels. For two years NTIS was told that the project was being studied at those higher levels.

Finally in 1981 NTIS found an alternative in MIDAS, which made a promising start at transferring technology to Bangladesh. Unfortunately, a 1982 internal reorganization resulted in the loss of all MIDAS staff who had had contact with NTIS, including the staff member who attended the NTIS workshop last April. This upheaval caused a halt in project activity for many months.

However, Mr. Badruddin Ahmad, MIDAS Director, has subsequently assured NTIS that project activity should start to pick up. In fact, MIDAS sent to NTIS some samples of promotional pieces for NTIS information to be placed in MIDAS's own magazine soon after, and has started to transfer NTIS information successfully to Bangladesh.

Training was resumed with the attendance of Mr. Sanjoy Barua of MIDAS at the Spring 1983 NTIS Information Systems Management Workshop.

BURMA

Principal Contact: U Sein Tun, Minister, Ministry of
Cooperatives

Comments:

In 1981 an NTIS project staff member visited Burma and identified a potential Cooperating Agency in the Ministry of Cooperatives, but the restrictions imposed on it by the Government of Burma (GOB) prevented it from joining the Network. GOB policy is that no Burmese organization may join any international organization or network other than the United Nations and its agencies. Alternative cooperative activities were proposed to the GOB, but no response has been received. However, several orders for NTIS information came from Burma that year as opposed to none before or since.

CHINA

Cooperating Agency since August 1979:

Institute of Scientific and Technical
Information of China (ISTIC)
P.O. Box 640
Beijing

Principal Contact: Lin Zixin, Director

Comment:

Although China is not a project country, it is important to the United States, and activities with China have been very beneficial to the project. Also, a U.S. Department of State executive committee announced that it is official U.S. policy to help China become a secure and modernized nation, and that provision of U.S. scientific and technical assistance is a high priority. As a result of NTIS and ISTIC activities to achieve this goal, demand for NTIS information increased significantly since 1979.

A one-year work-study program was instituted which taught selected Information professionals from China how NTIS functioned. Six specialists have attended the program so far, with two more scheduled to come in 1984. They each received in-depth training over a year

's time at NTIS, and those who have returned to China have reported that they have already made good use of the techniques they learned at NTIS. Any similar future project should include such comprehensive training as an integral part of the project.

INDIA

NTIS activity in India started in concert with the American Embassy Science Counsellor in 1976 when India was not a project country (i.e., USAID had no country program in India). Now that India is again a project country, USAID Mission involvement in the project is increasing. NTIS has had three Cooperating Agencies in India since 1978. They are:

Allied Publishers, Pvt., Ltd. (Allied)
751 Mount Rd.
Madras, 600002

Constellate Consultants, Pvt., Ltd. (ConCon)
505 Vishal Bhavan, 95 Nehru Place
New Delhi, 110019

Higginbotham's, Ltd.
165 Anna Salai
Madras, 600002

Principal NTIS Contacts:

Allied:	Em Muthukaruppan, Marketing Manager
ConCon:	Prithvi Haldea, Chief Executive
Higginbotham's:	V.S. Balaraman, Director

Total Demand to date: \$ 1,876,890

USAID Liaison: Priscilla Boughton, Director

Comments:

Originally, NTIS attempted to recruit the Indian Scientific Documentation Centre to join the project as CA, but Indian government action on our invitation was still bogged down in the bureaucracy in 1977. NTIS then sought a private sector representative, but found that the market was so large, that it could only be sufficiently covered by three separate Cooperating Agencies. It was most fortuitous that NTIS recruited all three, because their competition with one another has boosted demand for information at a faster rate than in any other project country.

Unfortunately, this strategy was not possible in the other project countries because of the restrictions their governments had on private enterprise, or because the government-sponsored Information Centers were subsidized and private industry couldn't compete. Also, in some project countries the market wasn't developed enough to support even one private Cooperating Agency.

One of the CA's, ConCon, has also been most diligent in obtaining Indian information for input into the NTIS collection. More than 350 documents from ConCon and 25 from Allied have been input, and both organizations have sent many more documents which could not

be input because of the reduced USAID budget for this project. As a result, an agreement has been signed by ConCon for the input of the documents they send NTIS on a royalty basis, the royalty to be shared by Con Con and the source of the information. This covers Con Con's costs and brings financial gain to the source. This, however, will mean that the books input will be more expensive to the end user, and that many books will not be worth inputting by the sources, because they will not sell enough copies to make the royalty payments worth the effort and expense of inputting them.

Con Con and Allied also did an outstanding job at leading discussions at all the Annual Regional Directors' Conferences. ConCon hosted the fourth Conference in New Delhi. Also its director had chaired the second Conference on short notice when the Thailand CA's director became ill.

Furthermore, these two organizations were also very active at promoting the use of NTIS information in India. Allied prepared its own version of AMTID for distribution in India, and hosted many book fairs there. ConCon developed the following promotion tools for NTIS information: Audio-Visual presentations and seminars; ConCon Prepared Searches (COPS); Current Research in Engineering Science and Technology (computerized selections from the Government Reports Announcements and Index, a fortnightly NTIS publication providing the bibliographic information and an abstract of every report NTIS received the previous fortnight); Outstanding NTIS Report Announcements; Technical Information for Industry; Specialists' Conducted Search (also computerized); NTIS Reports in Stock; and many brochures. All three organizations encouraged their clients to visit NTIS and attend NTIS workshops.

A special problem with private sector Cooperating Agencies is that U.S. Treasury regulations require a bond for any sum owed to NTIS. This has caused some problems due to currency restrictions in India. The problems have been resolved by one of the Agencies, but the other two have not been able to get bonds. Interestingly, this points out another difficulty having with only one CA in a project country (as NTIS does in all the other project countries). If one CA hadn't gotten the bond, NTIS would never have known that it was possible to do so.

INDONESIA

Cooperating Agency since November 1977:

Pusat Dokumentasi Ilmiah Nasional (PDIN)
Jl. Jenderal Gatot Subroto
P.O. Box 3065/Jkt
Jakarta

Principal NTIS Contacts: Mrs. Luwarsih Pringgoadisurjo,
Director
Bambang Supriyo Utomo, NTIS
Project Officer

Total Demand to date: \$ 82,296

USAID Liaison: Jerome Bosken, Science and
Technology Officer

Comments:

Indonesia provides an interesting study. The project was launched with ambivalence by the local USAID Mission, but with great fanfare by the Indonesian government; the signing ceremony appeared on local television. When the Mission saw the local interest and the further success achieved through the transfer of technology, they offered significant support, including writing a \$1000 to \$3000 line item in all their project budgets for purchasing information from PDIN.

This support was first evident after the visit of an NTIS contractor who sought case studies to determine whether NTIS information was actually being used by the organizations which purchased it. The case studies turned up instances of NTIS information making a substantial positive impact on local industry.

The positive effect of these case studies on the local USAID Mission shows how important they would be to any similar future project. With local Mission support, PDIN launched an extensive promotional campaign which established a large user base for project supplied information. Direct mail advertising and seminars have been the major tools in this campaign.

KOREA

Cooperating Agency since January 1974:

Korea Institute for Industrial
Economics and Technology (KIET)
P.O. Box 205/Cheongryangri
Seoul

Principal Contact: Young-Sie Lee, Head of
Information Service Department

Total Demand to date: \$ 219,158

USAID Liaison: Robert C. Liimatainen, Science
Officer

Comments:

KIET was formerly known as the Korea Scientific and Technical Information Center (KORSTIC) until KORSTIC was merged with The Korea Institute of Science and Technology (KIST) to form KIET in 1982.

KORSTIC was the first of the four pilot project Cooperating Agencies, but lost its project status in 1977, because the success of Korea's development program raised the per capita income above the USAID cutoff level. KORSTIC sent two staff members to the NTIS workshop almost immediately upon signing the agreement, and Korea's demand for information has risen ever since.

KIET's significant rate of transfer of NTIS information to Korea is one of the projects greatest successes. Until KORSTIC became a Cooperating Agency, NTIS had not made a single sale in Korea. Almost all non-military technical information came to Korea second hand from Japan. KORSTIC and KIET have developed a market for U.S. technical information that is greater than in many fully industrialized countries. Demand has remained stable in spite of the recession in Korea the last couple of years, and in spite of the rise in the local price of NTIS information as USAID subsidies ended along with Korea's status as a project country.

KIET's success can be attributed mainly to the higher level of development of Korea as compared with most of the other project countries, and the dynamism of the Korean people, especially KIET's staff. KORSTIC sponsored the visit of twenty Korean businessmen to NTIS in 1979, and has recommended the NTIS workshop to others since then. KIET's services included information searching, information photocopying, current awareness services, and procurement of information for clients, but perhaps most important is its Korean language promotion of NTIS publications.

KORSTIC/KIET also contributed greatly as a project graduate country to the success of the Network as a whole. KORSTIC hosted

the first Annual Regional Directors' Conference for the Network, and was represented at most of the subsequent ones. KIET also held an international seminar on the transfer of technology, which further spurred the use of scientific and technical information in Korea.

NEPAL

Cooperating Agency since March 1979:

Research Centre for Applied Science
and Technology (RECAST)
Tribhuvan University
Kirtipur, Kathmandu

Principal Contact: Purna P. Amatya, Head of
Documentation Unit

Total Demand to date: \$ 10,944

USAID Liaison: Samuel H. Butterfield, Director

Comments:

Nepal is one of the poorest and least developed of the Asian countries, but RECAST has ordered a significant amount of NTIS information over the years. Nepal is extremely difficult for NTIS staff to reach, so the expedient of having staff of one of the Indian Cooperating Agencies provide on-site training was used. Both RECAST and the field visitor reported that the experiment was a success. Not enough evidence is available to make a final judgement on the value of having one Cooperating Agency train another, but the idea is worth pursuing, and further attempts should be made and studied.

Several technical publications produced in Nepal have been added to the NTIS collection, one of them coming from RECAST, and the others from Development and Consulting Services in Butwal. The latter reports are all on the subject of biogas generation, a vital development area in which Nepal has led in cold climate research on the subject.

NEW GUINEA

Principal Contact: Mr. S.A. Patchett, University Librarian,
University of Technology

Comments:

Although no field visit to New Guinea was ever possible due to the project's budgetary constraints, the University of Technology was invited through correspondence in 1982 to join the Network. Nothing ever came of this, once again illustrating the futility of attempting to effectively operate a project like this with insufficient funds for travel.

A temporary solution in this case has been to sign an agreement with the Australian NTIS commercial dealer to have them handle project activity in New Guinea, but not much NTIS information has been transferred there to date.

PAKISTAN

Cooperating Agency since May 1975:

Pakistan Scientific and Technological
Information Centre (PASTIC)
142-C/II P.E.C.H.S.
Karachi-29

Principal Contact: Zafarul Hasan, Officer in Charge

Total Demand to date: \$ 25,576

USAID Liaison: Bryant George, Acting Director

Comments:

Pakistan's place in the project is an interesting case study. First, its USAID recipient status changed during the project from being in, to being out (when the USAID country program was temporarily suspended for political reasons), to being in again. NTIS had an agreement with PASTIC to provide project services to Pakistan and, despite inquiries, received no instructions from USAID on what effect the changed status should have on USAID-funded subsidies through this project, so NTIS continued administering project activities, but on an unsubsidized basis.

Second, PASTIC has not shown any real effort at transferring information despite the heartily expressed enthusiasm of many of its high level officials during their visits to NTIS or project conferences or when NTIS project staff visited Pakistan. In fact, PASTIC cancelled a one week lecture tour by an NTIS staff member that it had requested for its scientific agencies, and never rescheduled it. Perhaps Pakistan would be better served by a private sector CA which would have the incentive of direct profits to spur its efforts.

Sales of NTIS information to Pakistan increased dramatically when a major Pakistan technical institute began to order thousands of dollars worth of information. This institute had had so much difficulty in obtaining NTIS information through PASTIC, and was ordering so much, that NTIS opened a separate account for it. This is an example of how lethargic Cooperating Agencies can be circumvented, but also shows that a means needs to be found to work more effectively with local USAID Missions in locating more suitable Cooperating Agencies. Also, as in so many other instances in the life of the project, had the project budget permitted adequate in-country visits by NTIS project staff, project activities would have proceeded more effectively.

SOUTH PACIFIC

Cooperating Agency since 1983:

Australian Financial Review (AFR)
235-243 Jones St., Broadway
Box 506, GPO
Sydney, NSW 2001

Principal Contact: Ken McGregor, Information Manager

Comments:

Some exploratory correspondence has been carried on with organizations in the South Pacific, but none has so far had both the capability and willingness to provide NTIS information in the region, so the decision was made to have the NTIS Cooperating Agency in Australia, The Australian Financial Review (AFR), provide this service to the South Pacific. A special agreement for AFR's service to the USAID countries in the South Pacific was signed in December 1982, and trial service began immediately. As a result, demand for NTIS information in the area increased tenfold in the first year.

SRI LANKA

Cooperating Agency since July 1978:

Natural Resources, Energy, and Science
Authority (NESAs)
Sri Lanka Scientific and Technical Information
Centre
47/5 Maitland Place
Colombo 7

Principal Contact: N.U. Yapa, Head Librarian

Total Demand to date: \$ 3,363

USAID Liaison: Sarah J. Littlefield, Director

Comments:

Project success in Sri Lanka has been limited. Demand for NTIS information remained stable after the first year of project activity there, rather than increasing as hoped. The free enterprise zones should have increased demand, but SLSTIC doesn't seem to put too much effort into promotion despite NTIS stressing its necessity. The recent political troubles there have also had a noticeable detrimental effect on the demand for NTIS information.

In 1983 SLSTIC set up its own printing press for printing scientific reports and journals. New facilities, audiovisual services, a minicomputer and a complete microfiche system are also envisioned. Exchange of information with other countries, acquisition of material to input into the NTIS collection, workshops for library science officers, and exhibits of SLSTIC and NTIS products and services have also been undertaken recently, and it is hoped that this will increase the future Sri Lankan demand for U.S. information. SLSTIC hosted the third Annual Regional Directors' Conference in Colombo in 1980.

THAILAND

Cooperating Agency since August 1978:

Thailand Management Association (TMA)
308 Silom Rd.
Bangkok

Principal Contact: Suthep Visavakul, NTIS Project Manager

Total Demand to date: \$ 53,266

USAID Liaison: William Fleming, Assistant Program
Officer

Comments:

Locating a satisfactory Cooperating Agency here has been a continuing problem. The first CA was the Thai National Documentation Center (TNDC), which never generated more than a minimal demand for NTIS publications. NTIS determined that there was no motivation in the staff of this public sector agency to promote the use of information outside of its own parent organization, the Applied Scientific Research Corporation, and therefore terminated its agreement with TNDC.

TMA was then recruited, and two of its officers attended the NTIS workshop right away. TMA's performance has been much better than that of TNDC, but NTIS staff feel that the potential Thai market is still much larger than what has so far been tapped. To assist TMA in remedying this situation, NTIS has arranged cooperation between TMA and other organizations in Thailand. For instance, NTIS provided 300 reports in paper copy and microfiche to an exhibit jointly sponsored by USIA and TMA at the American University Alumni Center (AUA) in Bangkok.

During NTIS project staff field visits, calls were made on three local book dealers, the U.S. Embassy Commercial Library, and the Asian Institute of Technology. All groups agreed that Thai access to NTIS information should be expanded through commercial outlets and professional programs to reach more end users, and subsequent efforts in this regard have had some limited success already.

NTIS information that has gone to Thailand has been useful. Case studies carried out in 1979 indicated that NTIS information directly contributed to the success of projects on the disinfection of treated landfill leachate, and the optimization and use of water flow in a river basin. TMA hosted the second Annual Regional Directors' Conference in Pattaya, Thailand in 1979.

AFRICA

BOTSWANA

Cooperating Agency since March 1981:

The Botswana Technology Centre (BTC)
P.O. Box 438
Gaborone

Principal Contact: Derek Medford, Director

Total Demand to date: \$ 1,656

USAID Liaison: Paul Tuebner, Project Officer

Comments:

Botswana was not a high priority target country for the project, but a USAID officer who was stationed there had previously worked on the project as a contractor with NTIS, as did his wife. This individual brought the project to Botswana, and his wife worked for BTC until its own staff could be trained in carrying out project activities. Once again, this shows how important local USAID Mission support for the project can be.

Two of BTC's staff have attended the NTIS workshop, and demand for NTIS information is respectable for a country of Botswana's level of development. BTC is becoming a national clearinghouse for all matters technological, and prospects for continued successful cooperation are good. BTC can be viewed as one of the project's notable successes.

CAMEROON

Principal Contact: Mr. Ronald Levin
USAID Director

Comments:

A project staff field visit was paid to Cameroon in 1978, but no organization could be found that was both capable and willing to serve as a project Cooperating Agency. The most likely organizations were undergoing restructuring or personnel changes. They were the Organization Nationale pour la Recherche Scientifique et Technique, the Centre National d'Assistance aux Petites et Moyennes Entreprises, and the Pan African Institute for Development. Since then, follow up correspondence has been sent, but without result.

In 1983 the USAID Mission there requested information on project activity in the country, and was apprised of the situation. They suggested that a field visit be paid to the country, but by then, the project was winding down, and there was no funding available for travel. Cameroon is ripe for this type of activity, and should be a prime target country for any similar USAID African project in the future.

GABON

Cooperating Agency from April 1979 to December 1980:

Centre National de la Recherche Scientifique
et Technologique (CENAREST)
B.P. 842
Libreville

Principal NTIS contact: M. Nzoghe Nguema, Commissaire Generale

Total Demand to Date: \$102.05

Comments:

NTIS staff visited Gabon in response to a cable sent by the U.S. Embassy requesting assistance for Gabon's fledgling information center. Shortly afterwards, with Embassy assistance, the agreement was signed and Gabon joined the project as a regional center which could serve Cameroon, Zaire, and other nearby project countries. Unfortunately, there was a change in the directorship of CENAREST. No information was purchased after that, and the agreement was allowed to lapse the following year. Lack of project funds prevented on-site follow-up to revive this promising start.

GHANA

Cooperating Agency since May 1981:

Pendohbrukes, Ltd.
Box 01456-OSU
Accra

Principal Contacts: Augustus Brookman-Amissah &
Jack Aquaah-Harrison, Managing
Consultants

Total Demand to date: \$ 2,021

USAID Liaison: James R. Washington, Human Resources
Development Officer

Comments:

Project experience in Ghana has been an interesting case study. Several site-visits were paid to Ghana by different NTIS staff members. The prime candidate for Cooperating Agency was the Council for Scientific and Industrial Research (CSIR), but other than polite expressions of interest, no action was ever taken by CSIR to bring the project to Ghana. The USAID Mission in Ghana had even agreed to deposit \$10,000 in CSIR's NTIS deposit account.

NTIS also queried the university library, but was thwarted by expatriates who were against American involvement, as well as by regulations which prohibited commercial ventures at the library. Nor could sufficient interest be found at any of several other candidate organizations which were visited.

Finally in 1981, Pendohbrukes, a private consulting firm, which was interested in adding an information dissemination service to its activities, was recommended by John Cooper, Chief of the Office of Science and Technology of USAID/Ghana. This is another example of how important local mission support is for the project. Pendohbrukes made a very promising start, but recent political developments have made this Cooperating Agency's position precarious, and demand for NTIS information is low. It is also difficult for the Agency to fill the orders because of the difficulty of securing foreign exchange.

GUINEA-CONAKRY

Principal Contact: Kabine Kante, Director, Institute
National de la Recherche et de
Developpement (INRD)

Comments:

NTIS staff had sent a letter to Kabine Kante, Director of INRD, announcing NTIS participation in the Third International Dakar Trade Fair in 1978 and suggesting a meeting at the site where the NTIS/USIA demonstration of on-line computer searching as applicable to developing countries was being conducted. Mr. Kante sent his deputy to the USIA exhibit where initial overtures were made to INRD to join the Network. Follow-up letters were sent, but nothing came of them.

In 1981 another potential Cooperating Agency was identified, the National Center of Productivity. Once again initial favorable responses bore no fruit.

IVORY COAST

Principal contact: Timothee Ahoua, Ambassador of the Ivory
Coast to the United States

Comments:

NTIS staff had participated in a USIA exhibit in Abidjan in 1978, but relied on local USIA staff to make contacts for the project. Unfortunately, no contacts were made at that time. In 1980 the Ambassador of the Ivory Coast was contacted, and he showed great enthusiasm for bringing the project to his country. He referred NTIS to his commercial officer, a Frenchman who was completely uncooperative.

The Ivory Coast was visited briefly by an NTIS project officer for two days in 1981, but the most important Ivorian contacts were out of the country. Smaller organizations were visited and expressed interest in the project and in fact ordered NTIS information, but nothing came of these contacts in the long run.

Upon learning that the uncooperative commercial officer left the Ivorian Embassy in Washington, NTIS reinitiated contact with the Embassy Science Officer, who then recommended his home office to initiate project activity. So far nothing further has been heard from him.

LIBERIA

Principal Contact: Fred C. Hagel, Officer of Institutional
Development, USAID/Liberia

Comments:

An NTIS project staff member visited Liberia in 1977. Neither the USAID Mission, the U.S. Economic/Commercial Attache, nor the Dean of the Department of Science and Technology at the University of Liberia could suggest any potential Cooperating Agencies. One candidate, the Liberian Research Association, was approached, but the director never responded to follow up correspondence. The Mission advised that since the government of Liberia obviously does not attach a high priority to information transfer, it would be difficult to establish the project there.

KENYA

Cooperating Agency since September 1981:

Africa Book Services (E.A.), Ltd. (ABS)
P.O. Box 45245
Nairobi

Principal Contact: M.B. Dar, Director
Arif Dar, Marketing Manager

Total Demand to date: \$ 4,149

USAID Liaison: Satish Shah, Director of Projects

Comments:

Kenya has had a long and discouraging project history. It was one of the prime candidates for project involvement, but several trips by members of NTIS's Office of International Affairs failed to locate a suitable Cooperating Agency candidate, since neither the University nor the National Scientific Council showed any interest, and no other candidate was both willing and able to join the project. To launch the project, an expatriate consulting organization based in Canada was recruited, but it went bankrupt shortly thereafter.

The present Cooperating Agency, ABS, sent an unsolicited query to NTIS about making NTIS information available in Kenya, and after some correspondence the project was fully explained, and ABS began ordering NTIS books for its clients. An NTIS staff member visited ABS and provided training to ABS staff, and later an ABS staff member attended the NTIS workshop.

The transfer of NTIS information to Kenya grew rapidly as a result. However, ABS's very impressive start in providing information to its clients has been dealt a severe blow by the sudden balance of payments squeeze, which caused Kenyan demand for NTIS information to fall to less than half of what it had been.

Kenya is one country in which the USAID Mission provided virtually no help to the project, and was almost hostile to NTIS efforts in Kenya. In 1977 USAID/Kenya decided that this project was not compatible with their development objectives, and the NTIS project officer's trip to Kenya that year had to be under Department of Commerce auspices. The lack of Mission support made things very difficult for NTIS, which, however, received vital assistance from the USIA library in retrieving project reference material when the first project Cooperating Agency went bankrupt.

MALAWI

Principal contact: T.D. Thawale, Acting Secretary, National
Research Council

Comments:

NTIS contacted Mr. T.D. Thawale, Acting Secretary of Malawi's National Research Council when he visited the United States in 1980. For some time Thawale kept up a promising correspondence with NTIS, but this finally ended without any progress towards establishing a Cooperating Agency in Malawi.

MALI

Principal Contact: Alioune B. Camara, RESADOC Coordinator
The Sahelian Documentation Network
(RESADOC)
B.P. 1530
Bamako

USAID Liaison: Lawrence A. Dash, Director, Office for
Development Planning

Comments:

An NTIS project staff visit was made to Mali after initial correspondence indicated that RESADOC was interested in becoming involved in the project. Great interest was shown during the visit by the upper level staff of RESADOC, but the Minister in charge was away and no decision was taken then or subsequently. This is unfortunate since RESADOC serves all of the Sahelian countries and could have helped launched the project throughout that part of francophone Africa.

The USAID Mission's regional and local sections were helpful, but Mali is one of the poorest countries, and the Mission personnel were understandably more concerned with food-producing programs. Without local active support pushing the program, it could never get started. Several Mission personnel told the NTIS visitor that more trips to Mali would be necessary to start the project. As always, project funding levels severely constrained frequency of staff travel. Follow-up correspondence has been sent to RESADOC regarding the invitation to join the NTIS/USAID Network, but no response has been received.

NIGERIA

Cooperating Agency since March 1974:

Federal Institute of Industrial Research Oshodi
(FIIRO)
Office of the Research Director
Private Mail Bag 21023 Ikeja
Lagos State

Principal Contact: Mr. R.O. Sodipe

Total Demand to date: \$ 19,419

Comments:

Nigeria was one of the four original pilot project target countries in 1974. FIIRO was chosen as the most likely candidate for a Cooperating Agency, and a FIIRO staff member was brought to NTIS for the first NTIS Workshop. FIIRO has been a "graduate" of the USAID project since 1977, when USAID's country assistance program ended, but still sent staff members to NTIS for more workshop training.

Unfortunately, FIIRO has had an erratic history of demand for NTIS information, consistent only in that it never came close to fulfilling the potential sales NTIS staff expected from the country with the second highest GNP in all Africa. It appears that FIIRO hasn't effectively promoted the use of its own and NTIS's services, and is difficult to contact. When an NTIS staff member visited Nigeria for a USIA exhibit, she couldn't arrange an appointment to visit FIIRO for the full three weeks she was there. Since then another NTIS staff member visited Nigeria, but again couldn't contact FIIRO.

The impression formed by the experience of NTIS staff members in Nigeria has been borne out in conversations with Nigerians who have visited NTIS. They were either unaware that FIIRO offered NTIS publications for sale in Nigeria, or complained that it was so difficult to deal with FIIRO that they preferred to order directly from NTIS, despite the difficulty for them to obtain hard currency. NTIS has permitted such individuals to order their information from NTIS directly, but still tries to encourage FIIRO to fulfill its role as Cooperating Agency by offering it a substantial discount off normal NTIS foreign prices.

SENEGAL

Principal Contact:

Jacques Diouf, Director
Secrtaire d'Etat pour la Recherche
Scientifique et Technique (SERST)
61 Boulevard Pinet-Laprade
B.P. 3218
Dakar

Total Demand while a CA: \$6,980

USAID Liaison: David Shear, Director

Comments:

Senegal was first visited by NTIS project staff in 1978 during a USIA exhibit in which NTIS personnel assisted. Initial contact was made with SERST and the USAID Mission, and efforts made then bore fruit upon a second visit by NTIS three years later. NTIS received strong Mission support; the Mission funded the training of two SERST staff members to the NTIS workshop, and opened a \$10,000 deposit account for SERST with NTIS.

Unfortunately, due to stringent Senegalese governmental regulations, it was not possible for SERST to serve as a clearinghouse for foreign scientific and technical information to the public. Consequently, the USAID Mission in Dakar ended its local project to provide this service through SERST. The SERST deposit account was closed and the remaining funds returned to the USAID Mission, but SERST has been invited to open its own deposit account with NTIS.

During the period of NTIS/SERST cooperation, some \$7,000 worth of information was transferred to Senegal, but this was all reference material. SERST never sent one order for NTIS information. An NTIS staff member was invited to make a presentation about the project at a meeting of all the supervisors of SERST, and it appeared clear to NTIS project staff members at the time that certain individuals with close ties to France, were blocking GOS acceptance of the project.

NTIS has run into difficulty with former colonial powers' representatives in other countries as well, and such political realities must be taken into account in the designing of any similar project in the future. Also, adequate project funding to effect translation of popular NTIS publications into French, etc., would help in situations such as this.

SUDAN

Cooperating Agency since September 1979:

The National Council for Research (NCR)
P.O. Box 2404
Khartoum

Principal Contact: Abdalla Mohamed El Kheir

Total Demand to date: \$ 1,702

USAID Liaison: Arthur Mudge, Director

Comments:

"Brain drain" is a perennial problem adversely affecting most foreign assistance programs. It has been particularly troublesome for this project in Sudan. The first two of three NCR attendees at the NTIS workshops subsequently left NCR for positions in other countries. However, through great perseverance and determination on the part of NCR personnel, project activities are continuing. The project newsletter, AMTID, has been delivered by them by bicycle, because they did not have sufficient funds for postage.

NCR depends mainly on AMTID to disseminate news of NTIS activities and products, but their staff members also call personally on clients to generate more orders. All organizations in Sudan used to order their scientific and technical documents through specialized societies, especially in England, so it will take NCR time to establish in the minds of its potential clients the preferability of ordering through NCR.

The local USAID Mission has shown polite interest and expressed support for the project, but no substantive assistance, such as writing NCR into a project, has been apparent to date. Foreign exchange controls and budget constraints make the situation very difficult for NCR staff, and the fact that demand continues at all shows dedication on their part. Local Mission support and funding for both purchase and mailing of information could be quite helpful in this instance.

TANZANIA

Cooperating Agency since April 1980:

Tanzania Research Information Service (TANRIS)
P.O. Box 2404
Kivukoni Front
Dar es Salaam

Principal Contacts: Mr. H.W. Kayumbo, Director
 Mr. Hamisi Nguli, Documentalist
 Mr. Issa Munisi, Documentalist

Total Demand to date: \$ 12,501

USAID Liaison: Margaret Bonner, Program Officer

Comments:

Tanzania has been surprisingly successful in disseminating NTIS information. This can be attributed mostly to the dynamic and dedicated attitude of the the TANRIS staff dealing with NTIS. But the success would not have been possible without a grant from the Swedish International Development Authority to TANRIS to purchase information. \$12,000 was deposited into TANRIS's account when it became a Cooperating Agency, and \$50,000 has been deposited in the account recently.

TANRIS is stepping up its promotion of NTIS information, educating people about the value of information, a slow process. Techniques used to promote the transfer of technology include an increased use of information drives, exhibitions and national seminars to promote awareness.

A National Seminar was held in January, 1983 on the Utilization of National Technological and Scientific Information to create more awareness and a higher regard for information products. As a result, Tanzanian demand for NTIS information increased by more than \$1,000, or 40% over the same period the previous year. NTIS had been invited to attend this seminar, but lack of project funds precluded this opportunity.

TANRIS staff have also been very helpful at the Annual Regional Directors' Conferences, always providing thoughtful and pertinent papers to present to the other participants. All in all, the project has been a notable success in Tanzania.

UGANDA

Principal Contact: Nyanzi Uganda Commercial Bank
Box 973
Kampala

Comments:

An inquiry was received by NTIS project staff from the Nyanzi Uganda Commercial Bank requesting certain Appropriate Technology information from the NTIS collection for further dissemination throughout Uganda. The project activities were outlined to the bank and further information on their activities was requested, but no response has been forthcoming. A similar correspondence was carried out the previous year with another Ugandan organization, but the country is apparently in too much political turmoil for the project to be feasible there.

UPPER VOLTA

Principal Contact: Mr. D. Some
National Center for Scientific and
Technological Research (CNRST)
Ouagadougou

USAID Liaison: Richard C. Mayer, Director

Comments:

Based on an introduction from RESADOC, the Sahelian regional information network, initial and follow-up NTIS correspondence has been sent to CNRST regarding NTIS's invitation to join the NTIS/USAID Network. The USAID Mission has been active in assisting NTIS in this effort. To date, the inability of NTIS staff to visit the organization, due to lack of travel funds, has effectively prevented the negotiations from concluding successfully. The USAID Mission made it clear that a visit by NTIS would be necessary to launch the project there. Lack of the deposit account mechanism and project discounts, together with Upper Volta's foreign currency restrictions have effectively prevented any transfer of U.S. technology through NTIS to Upper Volta outside of the project.

ZAIRE

Cooperating Agency since September 1981:

Institut Superieur de Developpement Rural (ISDR)
B.P. 2849
Bukavu

Principal Contact: Georges Defour, Director

Total Demand to date: \$0

Comments:

NTIS personnel participated in a USIA exhibit in Zaire in 1977, and someone from the Zairian president's office subsequently attended the NTIS workshop. However, no replies to NTIS follow-up correspondence have ever been received. Further invitations to the Zairian national information center also received no replies.

Finally, in 1981 the Belgian director of ISDR responded to the NTIS invitation for ISDR to join the NTIS/USAID Network, and seemed eager to begin the dissemination of NTIS information in his region of Zaire. Unfortunately, travel to and from Bukavu is so involved that it has not been possible to date to have him or his staff visit NTIS for training. At one point his ticket and visa had been arranged, but NTIS had to inform him that it could not guarantee payment for the ticket because USAID funding for the project had not yet been confirmed. The AID/DIU parent bureau's consistently long delays each fiscal year in determining the level of project funding, and even longer delays in making the funds available to NTIS, had a very direct negative impact on NTIS efforts to improve the effectiveness of technology transfer to Zaire.

Also, the project's inadequate funding level has not permitted the visit of an NTIS staff member to Zaire.

ZAMBIA

Principal Contact: Dr. S.M. Silangwa, Director, National
Council for Scientific Research (NCSR)

Comments:

NTIS staff corresponded with NCSR about the project and received a favorable response. Consequently, NTIS took advantage of a USIA exhibit in 1980 to negotiate with NCSR about the agreement. U.S.-Zambia political considerations have so far blocked the signing of a formal agreement for Zambia to join the project. Because of this, it has been impossible to start up project activity in Zambia, but many other contacts have been made, and a fair amount of NTIS documents have been ordered over time.

Lower-level staff of NCSR were instructed by Dr. Silangwa to take advantage of NTIS, and for some time correspondence and information transfer continued, but without the training and agreement to reinforce it, these contacts ended after about a year.

ZIMBABWE

NTIS staff visited Zimbabwe in 1981 and identified two likely candidates for a Cooperating Agency, the National Science Council (NSC) and the University of Zimbabwe. Both were eager to start up again after the disruptions of the war. The University soon determined that it didn't have the staff or funds to run the project for Zimbabwe, and the NSC never properly responded to NTIS follow-up correspondence. Adequate project travel funds would have allowed in-country follow-up efforts to reach a formal agreement instituting the project in Zimbabwe.

THE NEAR EAST

EGYPT

Principal Contact: Aadel El-Duweini, Marketing Manager
National Information and
Documentation Center (NIDOC)
Sharia Al-Tahrir Street - Dokki
Giza

USAID Liaison: Janice Weber, Program Officer

Comments:

NTIS has been trying to start project activity here since the earliest days of the project. However, several problems arose. First, the USAID program in Egypt changed from development support-assisted to security support-assisted, and NTIS was unsure of how this affected project status. In any case, despite 1979 visits to NTIS by Egyptian officials from both NIDOC and the Egyptian Society for the Dissemination of Universal Culture and Knowledge (ESDUCK), and visits of NTIS staff to those organizations in Egypt, no agreement was concluded. In 1978, negotiations had also been pursued with Al-Ahram with equal lack of success.

Follow-up correspondence has been sent to NIDOC regarding NTIS's standing offer for it to become a member of the NTIS/USAID Network, but no response has been received. NTIS even sponsored the attendance of a NIDOC staff member at the project's New Delhi Conference in 1981, without any positive result for the project. ESDUCK, however, translated two AMID issues into French for NTIS.

Egypt's demand for NTIS information fluctuates greatly, but remains far below what it should be. When and if project activity commences in Egypt, demand for NTIS information should increase dramatically.

Egypt appears to be a very difficult country for project activity, especially since there seems to be a low level of awareness of the need for information. A recent poll at a businessman's meeting in Cairo asked what information could help them improve their performance in their jobs. Virtually all responded that they knew all they had to know to do their job.

JORDAN

Principal Contact: Lois Richards
Deputy Director, USAID/Jordan

Comments:

Abdullah Khatib of Jordan's Royal Scientific Society (RSS) toured NTIS while participating in a UNESCO information seminar hosted by NTIS in 1978. Despite his appeals for assistance, and ample NTIS follow up, including contact with USAID/Jordan, nothing ever came of it.

RSS had claimed it was planning to set up a regional information center for all the Arab states, and appealed to USAID/Jordan, to no avail, to fund training travel to NTIS workshops. NTIS has recommended to RSS a private consultant to help set up the planned information center. Such a center could perhaps focus attention on the subject of technical information to a point where the national advantages of association with an NTIS project would be more apparent to RSS.

MOROCCO

Principal Contact: Mark Ward, Program Officer,
USAID/Morocco

Comments:

Morocco was visited by NTIS staff in 1978 to identify prospective Cooperating Agencies. All the organizations contacted pointed to the Centre National de Documentation (CND) as the only logical candidate. The negotiations never bore fruit, for reasons which neither NTIS nor the USAID Mission could determine. Perhaps CND politics kept the project from Morocco. The staff of CND, however, indicated that they were already ordering at least some NTIS information through the European Space Agency on-line search service in Frascati, Italy. Since all other organizations contacted by NTIS during the search for a Cooperating Agency had deferred to CND, NTIS efforts in Morocco were stymied.

PORTUGAL

Principal Contact: Prof. Mendes-Mourao, Director, Junta Nacional de Investigacao Cientifica e Tecnologica (JNICT)

Comments:

In 1981, with full U.S. Embassy assistance, NTIS contacted JNICT and offered project assistance. After several months of consideration, the offer was turned down because JNICT was not yet ready for the information dissemination activity NTIS sought to establish.

TUNISIA

Principal Contact: Mr. Moncef Laroussi
Societe Tunisienne de Diffusion (STD)
5, Ave. de Carthage
Tunis

Total Demand to date: \$ 13,546

USAID Liaison: Richard Stevenson, Science and
Technology Officer

Comments:

The project in Tunisia has had a difficult history. NTIS first recruited an organization as Cooperating Agency which turned out to be prohibited by law from importing books, since another organization had a government monopoly on that activity. It took NTIS considerable time to learn why there were no sales at all despite a positive deposit account for the organization. Apparently the cause was a complex version of what is most prudently described here as office politics between this original CA and STD.

How such problems can be avoided is not readily apparent since one can't know about them if no one mentions it, and one assumes an organization signing an agreement can fulfill it. Of course, as always, the project's ever-constricted travel funds kept on-site visit frequency well below what was necessary to keep project staff informed of in-country project activities. There was also difficulty in getting the present Cooperating Agency to sign the agreement, presumably because of their monopoly position. They objected to all clauses which protected NTIS from non-payment.

In November 1983, Ms. Saida Zouiten, a USAID/Tunisia local national staff member, visited NTIS. In consultations with NTIS staff, she offered her full support in helping NTIS resolve the problems that were preventing STD from joining the NTIS/USAID Network. As a result, the signed agreement was waiting for the NTIS staff member when he arrived on a site visit to STD. Both USAID and the U.S Peace Corps in Tunisia have expressed an interest in cooperating with NTIS and STD.

AFRICA - NUMBER OF DOCUMENTS SOLD

<u>COUNTRY</u>	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	<u>TOTAL</u>
Region	138	20	322	885	133	410	548	787	645	1360	1174	8329
Botswana								5	11	61	54	131
Cameroon							9		6	2		17
Ghana		6	63	7	33	18	24	84	88	76	106	505
Kenya	7	10	32	24	15	25	138	252	52	336	123	1014
Liberia				7			23	79	2	13	1	125
Malawi								9	5		2	16
Mali						10	1	4	12	14	9	50
Mauritania							3	2	15	18	4	42
Nigeria	101	4	197	798	76	342	287	261	117	127	112	2422
Rwanda							3				1	4
Sierra Leone								8	1	6	2	17
Senegal					6		11		4	147	4	2079
Sudan								35	30	68	89	222
Tanzania	30		30	31	3	5	25	4	274	452	579	1433
Zaire				10				12	6	33	30	91
Zambia				8		10	16	23	21	4	27	109
Zimbabwe							8	9	1	3	31	52

AFRICA - SALES OF INFORMATION (U.S.\$)

Page 1

<u>COUNTRY</u>	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	<u>TOTAL</u>
<u>Region</u>	881	213	9319	1035	4353	4353	10044	13487	9861	24847	14057	89706
Botswana								98	244	989	1128	2459
Cameroon							46		306	25		377
Ghana		59	270	73	43	205	161	659	1276	1136	1443	5325
Kenya	56	95	186	255	124	239	1322	4525	862	4936	1599	14199
Liberia				70			138	1090	34	215	10	1557
Malawi								47	66		56	169
Mali						121	9	73	133	222	123	681
Mauritania							24	33	138	143	55	393
Nigeria	721	59	1057	8366	790	3667	7795	3311	2451	1714	920	30851
Rwanda							26				13	39
Sierra Leone								15	14	39	35	103
Senegal					49		122		44	7327	49	7591
Sudan								3145	456	1624	1045	6270
Tanzania	104		96	333	29	39	159	37	3336	5364	6831	16328
Zaire				125				110	199	981	320	1735
Zambia				97		82	96	191	286	72	145	969
Zimbabwe							146	153	16	60	285	660

ASIA - NUMBER OF DOCUMENTS SOLD

Page

<u>COUNTRY</u>	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	<u>TOTAL</u>
<u>Region</u>	518	4555	4630	5955	33571	26698	54059	122474	107837	84141	103239	547677
Bangladesh						2	7	5	5	6	65	90
India	300	3900	3000	3600	12900	11500	32300	94500	78600	53900	54600	349100
Indonesia	30	110	280	260	11400	2400	4500	5700	7100	4300	5400	41480
Korea		30	520	530	5800	9600	14000	17500	19300	23300	21000	111580
Nepal	21	5					125	500	300	125	275	1351
Pakistan	14	125	100	325	1630	750	125	11	75	1140	20100	24395
Philippines	62	85	380	490	850	300	1400	2400	1250	790	860	8867
South Pacific						22	38	43	47	55	54	259
Sri Lanka					1	24	64	115	110	50	110	474
Thailand	91	300	350	750	990	2100	1500	1700	1050	475	775	10081

ASIA - SALES OF INFORMATION (U.S.\$)

<u>COUNTRY</u>	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	<u>TOTAL</u>
<u>Region</u>	3696	37189	35967	47899	131211	141146	362392	470736	495052	496546	586105	3218925
Bangladesh						15	76	40	135	78	2275	2619
India	2170	31935	24442	30133	80536	79770	253465	344430	372376	376405	422126	2017788
Indonesia	210	762	1535	1356	4957	7669	18343	16111	23195	15943	21804	111885
Korea		229	3996	4015	25347	38837	48872	74334	66149	80243	86070	428092
Nepal	147	39					2782	4002	3196	1916	5024	428092
Pakistan	98	986	1109	2501	8266	1760	3664	285	7391	3888	26079	56027
Philippines	434	682	2874	3874	4846	3634	16250	10011	7057	6278	7058	62998
South Pacific						223	129	745	840	989	1031	3957
Sri Lanka					6	247	1265	1422	1576	1052	1582	7150
Thailand	637	2556	2011	6020	7253	8991	17546	19356	13137	9754	13056	100317

NEAR EAST - NUMBER OF DOCUMENTS SOLD

<u>COUNTRY</u>	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	<u>TOTAL</u>
<u>Region</u>	18	5	63	85	1137	327	561	550	537	1654	1355	6292
Egypt				8	16	3	42	17	30	46	56	218
Jordan	1	1	49	27	29	31	64	43	22	48	56	371
Lebanon				35		4	33					72
Morocco	8	4		5	19	1	2	3	2			44
Portugal					992	240	240	287	371	259	355	2744
Syria					78	47	58	198	112	69	26	588
Tunisia	9		14	10	3	1	122	2		1232	862	2255

NEAR EAST - SALES OF INFORMATION (U.S.\$)

<u>COUNTRY</u>	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	<u>TOTAL</u>
<u>Region</u>	127	47	459	561	15316	4536	9793	11387	15031	18790	17635	93682
<u>Egypt</u>				213	425	34	1094	167	428	1341	802	4504
Jordan	8	9	378	108	132	312	565	1296	308	775	1419	5310
Lebanon				152		24	912					1088
Morocco	56	38		28	288	5	9	15	26			465
Portugal					13397	3433	3454	6318	11588	8215	7852	54257
Syria					1047	701	824	3576	2681	1553	578	10960
Tunisia	63		81	60	27	27	2935	15		6906	6984	17098